UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,465	08/17/2007	Young-Lak Kim	4900-0026	1315

22429 7590 02/18/2011
LOWE HAUPTMAN HAM & BERNER, LLP
1700 DIAGONAL ROAD
SUITE 300
ALEXANDRIA, VA 22314

EXAMINER	
SHEDRICK, CHARLES TERRELL	
ART UNIT	PAPER NUMBER
2617	
MAIL DATE	DELIVERY MODE
02/18/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/594,465	KIM ET AL.	
	Examiner	Art Unit	
	CHARLES SHEDRICK	2617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 December 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 12/7/11 have been fully considered but they are not persuasive.

2. Applicant argues

a. Double Patenting

The indication that claims 1-16 are provisionally rejected for nonstatutory obviousness-type double patenting over copending Application No. 11/628,977 is noted. Applicants respectfully submit that the necessity of filing a terminal disclaimer will be reviewed and considered if claims remain rejected under this basis after resolving all other objections/rejections.

3. The Rejection is maintained accordingly.

4. Applicant argues that claim 1 is amended to recite a mobile communication terminal capable of communicating with an asynchronous mobile communication system and a synchronous mobile communication system. The mobile communication terminal comprises, among other things, "the synchronous modem having operating modes including a power-off mode, an idle mode, and a low power mode consuming less power than the idle mode, the low power mode referring to a time period during which the synchronous modem is powered-on but transmitting and receiving of information by the synchronous modem are suspended" and "wherein the asynchronous modem is configured to . . . output a modem operating signal to the synchronous modem for instructing the synchronous modem to leave the power-off mode and enter the low power mode." Park and Schmidt fail to disclose or suggest at least these features.

5. However, the Examiner respectfully disagrees. Since even the modems communicate with one another (i.e., outputs) regarding systems (e.g., Bluetooth and Cellular) and as a result they act accordingly. Therefore, Schmidt would still read on ...Outputting a signal and based on the logic of the signal the modem operates in a particular mode.

Applicant argues Schmidt merely describes a Bluetooth transceiver 130 having two power modes: a powered-down mode for saving power and an activated/idle mode for detecting a Bluetooth channel. Id at col. 6, ln. 29-49. However, Schmidt appears to be silent regarding the recited "a power-off mode, an idle mode, and a low power mode," which refers to a power mode "during which the synchronous modem is powered-on but transmitting and receiving of information by the synchronous modem are suspended." Also, Schmidt at best describes switching the Bluetooth transceiver 130 from the power-down mode to the activated/idle mode for detecting Bluetooth channels once the user arrives at a destination, witch indeed teaches away from the recited "output a modem operating signal to the synchronous modem for instructing the synchronous modem to leave the power-off mode and enter the low power mode," where the transmitting and receiving of information by the synchronous modem are suspended. Id. at col. 6, ln. 7-28. Therefore, for at least the reasons advanced above, Park and Schmidt do not render amended claim 1 obvious.

6. However, The Examiner respectfully disagree. As a first matter, the claims appear to define the Low power mode as powered on but transmitting and receiving is suspended. Powered off for the sake of this example would mean no power or sleep mode, this leaves idle mode (??) which appears to be undefined over the prior art or in the claims. It would appear that Schmidt teaches a low power standby mode and a deep sleep standby mode (off) and at least and

idle mode where the station is merely camping and not transmitting. Consider also that one of ordinary skill in the art would recognize the idle mode as a lower power mode since transmitting generally uses more power.

7. Applicant argues amended claim 7 recites, among other things, "if the mobile communication terminal is determined to be in the hand-over cell, outputting, by the asynchronous modem, a modem operating signal to the synchronous modem for instructing the synchronous modem to leave the power-off mode and enter the low power mode, the low power mode referring to a time period during which the synchronous modem is powered-on but transmitting and receiving of information by the synchronous modem are suspended." Similar to the reasons presented for amended claim 1, Park and Schmidt fail to render amended claim 7 obvious as well.

However, the Examiner respectfully disagrees for reason noted above.

Double Patenting

1. Claims 1-16 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claim 1-18, 26-27 and 30-34 of copending Application No. 11/628977. Although the conflicting claims are not identical, they are not patentably distinct from each other because the subject matter refers to a asynch to synch HO and low power state of the modem.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. The factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-13 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park et al US Patent No.: 6,704,581 B1 in view of Schmidt 7,526,267 B2.

Consider Claims **1, 7** and 13, Park teaches a mobile communication terminal capable of communicating with an asynchronous mobile communication system and a synchronous mobile communication system , the mobile communication terminal(**e.g., 300 of figure represent a base station that can communicate with the asynch bs and sync bs - col. 4 lines 34-36**), comprising: an asynchronous modem configured to communicate with the asynchronous mobile communication system, (**e.g., the dual mode station communication operating parameters and measurement - see at least figure 9 and col. 7 lines 13- col. 10 line 49**).

However, Park does not specifically teach a synchronous modem coupled to the asynchronous modem and configured to communicate with the synchronous mobile communication system, the synchronous modem having operating modes including a power-off mode, an idle mode, and a low power mode consuming less power than the idle mode, the low power mode referring to a time period during which the synchronous modem is powered-on but transmitting and receiving of information by the synchronous modem are suspended; wherein the asynchronous modem is configured to, after the mobile communication terminal enters a predetermined hand-over cell defined between the asynchronous mobile communication system and the synchronous mobile communication system, output a modem operating signal to the synchronous modem for instructing the synchronous modem to leave the power-off mode and enter the low power mode operated.

In analogous art, Schmidt teaches a synchronous modem coupled to the asynchronous modem and configured to communicate with the synchronous mobile communication system(**e.g., cellular core 110 and short range core 130**), the synchronous modem having operating modes including a power-off mode, an idle mode(e**.g., see col. 6 lines 7-22**), and a low power mode consuming less power than the idle mode(e**.g., see col. 6 lines 7-22**), the low power mode referring to a time period during which the synchronous modem is powered-on but transmitting and receiving of information by the synchronous modem are suspended(e**.g., see col. 6 lines 7-22**);wherein the asynchronous modem is configured to, after the mobile communication terminal enters a predetermined hand-over cell defined between the asynchronous mobile communication system and the synchronous mobile communication system, output a modem

operating signal to the synchronous modem for instructing the synchronous modem to leave the power-off mode and enter the low power mode(e**.g., see col. 6 lines 7-22**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Park to include a synchronous modem operated in an off-state according to the modem operating signal outputted from the asynchronous mobile communication system and then transited to a low power mode, which is a standby mode, wherein said multi mode multi band mobile communication terminal performs the hand-over to the multi mode multi band mobile communication terminal according to the hand-over triggering from the asynchronous mobile communication system by the synchronous modem in the standby mode for the purpose of saving batter power as taught by Schmidt **in col. 6 lines 7-16.**

Consider claims 2 and 8 and as applied to claims 1 and 7, Park as modified by Schmidt teaches wherein the asynchronous modem is configured to determine if the mobile communication terminal is in the handover cell during transmitting and receiving signals to and from the asynchronous mobile communication system for setting a call (**e.g., monitoring signal strength appropriate for making a call - see at least figure 9**).

Consider claims 3 and 9 and as applied to claims 2 and 8, Park as modified by Schmidt teaches the claimed invention wherein performing a hand-over from the asynchronous communication system to the synchronous system the synchronous modem transmits and receives signals to and from the synchronous communication system for setting **e.g., see handoff completion in at least figure 9**).

Consider claims 4 and 10 and as applied to claims 1 and 7, Park as modified by Schmidt teaches the claimed invention wherein the asynchronous modem is configured to

automatically output the modem operating signal to the asynchronous modem once the mobile communication terminal enters the asynchronous mobile communication system area and hand-over cell(**i.e., based on signal measurements - see at least figure 9**).

Consider claims 5 and 11 and as applied to claims 4 and 10(for examination purposes -see claim objection), Park as modified by Schmidt teaches the claimed invention characterized in that after operating the modem and performing the hand-over, the synchronous modem maintains the idle state after performing a handoff (**i.e., listening state - figure 9 reflects a mobile that transitions to a listening state to receive information from the system**).

Consider **claims 6 and 12 and as applied to claims 1 and 11**, Park teaches the claimed invention except the multi mode multi band mobile communication terminal according to claim 1, characterized in that the low power mode of the synchronous modem refers to the time period during which the power of the synchronous modem is on, transmitting and receiving of information are suspended and a CPU operation of the synchronous modem is stopped.

In analogous art, Schmidt teaches multi mode multi band mobile communication terminal (**e.g., see figure 1**), characterized in that the low power mode represents that although the power is on, transmitting and receiving of information are suspended and a CPU operation of the modem is stopped (**e.g., sleep and relevant parts are listening col. 6 lines 7-41**).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Park to include that the low power mode of the synchronous modem represents that although the power of the synchronous modem is on, transmitting and receiving of information are suspended and a CPU operation of the modem is stopped for the

purpose of power conservation as taught by Schmidt.

Consider claim 16 and as applied to claim 13, Park as modified by Schmidt teaches the hand-over method of a multi mode multi band between the asynchronous communication network and the synchronous communication network according to claim 13, characterized in that at the time of the hand-over of the mobile communication terminal, the initial power value is transmitted together with a hand-over requesting message transmitted from the asynchronous mobile communication system to the mobile communication terminal (**see at least figure 9**).

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES SHEDRICK whose telephone number is (571)272-8621. The examiner can normally be reached on Monday thru Friday 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571)-272-7922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Charles Shedrick/
Primary Examiner, Art Unit 2617